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REMARKS

The Applicants thank the Examiner for the thorough consideration given the present application. Claims 1-9, 15-16, and 21-27 are pending. Claims 10-14 and 17-20 were previously cancelled. Claims 1 and 21 have been amended and claims 24-27 have been added. Claims 1 and 21 are independent. The Examiner is respectfully requested to reconsider the rejections in view of the amendments and remarks set forth herein.

Rejection Under 35 U.S.C. §103(a)

Claims 1-9, 15,16, and 21-23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Letcher et al. (U.S. 5,581,672) in view of Evans et al. (U.S. 6,775,647). Further, Official Notice was taken split screens are disclosed by Hoskins et al. US 6,98,412. (This Patent No. does not appear to be correct. The correct Patent No. of Hoskins et al. appears to be U.S. 6,268,853). This rejection is respectfully traversed.

Arguments Regarding Independent Claims 1 and 21

While not conceding the appropriateness of the Examiner's rejection, but merely to advance the prosecution of the present invention, each of independent claims 1 and 21 has been amended to recite a combination of elements directed to apparatus for estimating a manufacturing cost for a product, including *inter alia*

a cost calculation processor for calculating the manufacturing cost based on information received from said first input device at each stage of design of the product, and

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initial cost factor data independently supplied from at least two external suppliers using separate input devices, the cost calculation processor being adapted to recalculate the manufacturing cost based on updated cost factor data supplied by each of the at least two external suppliers;

a display device for simultaneously displaying the calculated manufacturing costs at the multiple stages of design for the at least two external suppliers, so that a user can determine which of the at least two external suppliers is better at each of the multiple stages of design.

Support for the combination of elements set forth in each of claims 1 and 21 can be found in the specification, for example, in paragraphs [0037] to [0040] and [0047] to [0049]. See also FIG. 6 which clearly shows "a display device for simultaneously displaying the calculated manufacturing costs (c1, c2, c3) at the multiple stages of design (original design, after change a1, after change a2) for the at least two external suppliers (MA, MB)".

Applicants respectfully submit that the combination of elements as set forth in each of independent claims 1 and 21 is not disclosed or made obvious by the prior art of record, including Letcher et al., Evans et al., and Hoskins et al.

The Examiner asserts that Letcher et al. would inherently comprise a memory and processor. The Examiner further asserts that Evans et al. teaches a cost calculator and display device. However, the Examiner has provided no support that Evans teaches or suggests each and every limitation of the present invention.

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For example, as best understood by the Applicants, nowhere in Evans et al. is there no hint that the Evans et al. apparatus includes the cost calculation processor being adapted to recalculate the manufacturing cost based on updated cost factor data supplied by each of the at least two external suppliers at multiple stages of design, as set forth in independent claims 1 and 21 as amended herein.

For example, Evans et al. FIG. 2 (Step 33) and column 4, line, 57-58 merely disclose "...a cost estimate is calculated for each manufacturing operation using analytical tools..."

The Applicants can find no evidence that the Evans et al. document discloses a cost calculator adapted to "recalculate the manufacturing cost based on updated cost factor data" or to "recalculate the manufacturing cost based on updated cost factor data supplied by each of the at least two external suppliers", as set forth in independent claim 1.

Regarding the Hoskins et al. reference, it is not clear what passage of this document to Examiner is citing. Hoskins et al. FIG. 72, for example, appears to disclose a split screen, with an upper screen showing "Mechanical Resources" and a lower screen showing "Control Resources". As best understood by the Applicants, FIG. 72 merely discloses the relationship between items on the "Mechanical Resources" list and items on the "Control Resources" list at specific times. The items listed on "Mechanical Resources" screen and the "Control Resources" screen are not the same. By contrast, in the present invention, calculated manufacturing costs of one manufacturer are shown simultaneously with calculated manufacturing costs of the others of the at least two manufacturers. Thus, a visual

comparison of "like items" (calculated manufacturing costs) can easily be made.   As best understood by the Applicants, the Evans et al. device does not provide for such a comparison.

The present invention was conceived and reduced to practice in order to accommodate the challenges of an iterative design and iterative cost estimating process involving multiple design changes and multiple initial and updated cost estimates being provided by multiple suppliers.   The present invention provides a novel solution to these challenges by providing for the first time a device which simultaneously displays the manufacturing costs or the recalculated manufacturing costs for the one or more stages of design for the at least two of the external suppliers, so that a user can determine which of the multiple suppliers is better at each of the stages of design.   With the present invention, a user is able to simultaneously review and compare manufacturing costs of different manufacturers, and to observe simultaneously on one display how these comparative costs change relative to one another, at different design stages and as the different manufacturers update their manufacturing cost data.

The Examiner has provided no evidence that either the cited references, or that which is commonly know in the art, suggests the subject matter set forth in each of independent claims 1 and 21.

At least for the reasons explained above, Applicants respectfully submit that the combination of elements as set forth in each of independent claim 1 and 21 is not disclosed

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or made obvious by the prior art of record, including Letcher et al., Evans et al., and Hoskins et al.

Therefore, independent claims 1 and 21 are in condition for allowance.

Dependent Claims

The Examiner is advised that dependent claims 24 to 27 have been added to set forth additional novel features of the present invention.

All dependent claims are in condition for allowance due to their dependency from allowable independent claims, or due to the additional novel features set forth therein.

Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a) are respectfully requested.

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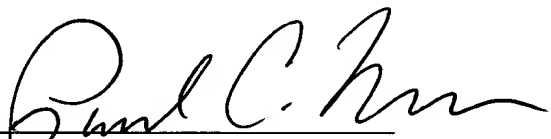*Page 14 of 14*

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, he is invited to telephone Carl T. Thomsen (Reg. No. 50,786) at (703) 205-8000.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

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Respectfully submitted,

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